

## ANATOMY – DEFINITION

**Anatomy is the branch of biological science that studies the structure of the human body, including the shape, size, position, and relationship of body parts.**

□ **In simple words:**

**Anatomy = Study of body structure**

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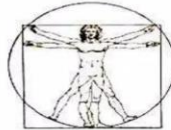
## BRANCHES OF ANATOMY

### 1. Gross Anatomy (Macroscopic Anatomy)

#### INTRODUCTION

##### **Anatomy**

- ◉ Studies of the body parts and their relationships.



##### **Macroscopic (Gross) Anatomy**

- ◉ Study of large body structure. (e.g: heart, lungs, kidneys... etc.)
- can be further divided into:

1. **Regional Anatomy**  
- all structures in one particular region.



Contl..

2. **Systemic Anatomy**  
- system by system



3. **Surface Anatomy**  
- study of internal body structures



##### **Microscopic Anatomy**

- ◉ Very small structures that cannot be seen with naked eyes.

1. **Cytology** \_\_\_\_\_  
- Study of body cells
2. **Histology** \_\_\_\_\_  
- Study of body tissues



### **Sub-divisions of Gross Anatomy:-**

1.1) **Surface Anatomy:-** Branch of anatomy that focuses on the study of the external features of the body and the relationships between the underlying structures.

- It involves the examination and palpation (feeling with the hands) of the body's surface to identify anatomical landmarks, muscle contours, bony prominences, and other superficial structures.
- This knowledge is essential for various medical disciplines, including clinical examination, surgery, and medical imaging.

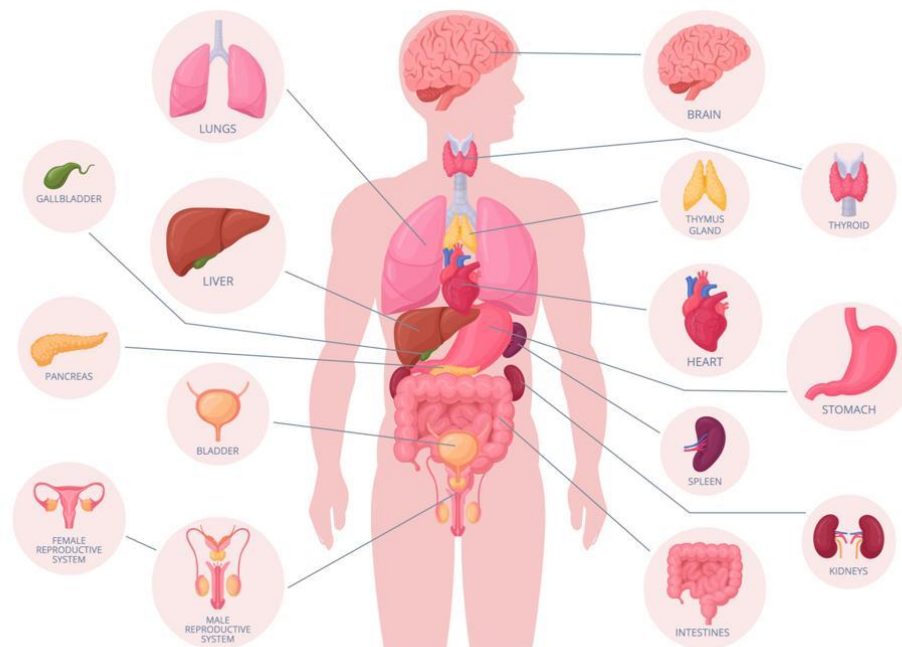
1.2) **Regional Anatomy:-**study of specific regions of the body, such as the head, neck, thorax, abdomen, and limbs.

1.3) **Systematic Anatomy:-**the study of organ systems, such as the cardiovascular, respiratory, digestive, and nervous systems.

Systemic anatomy provides insights into how different organs work together to maintain the overall function of the body.

## **ANATOMY OF THE HUMAN BODY**

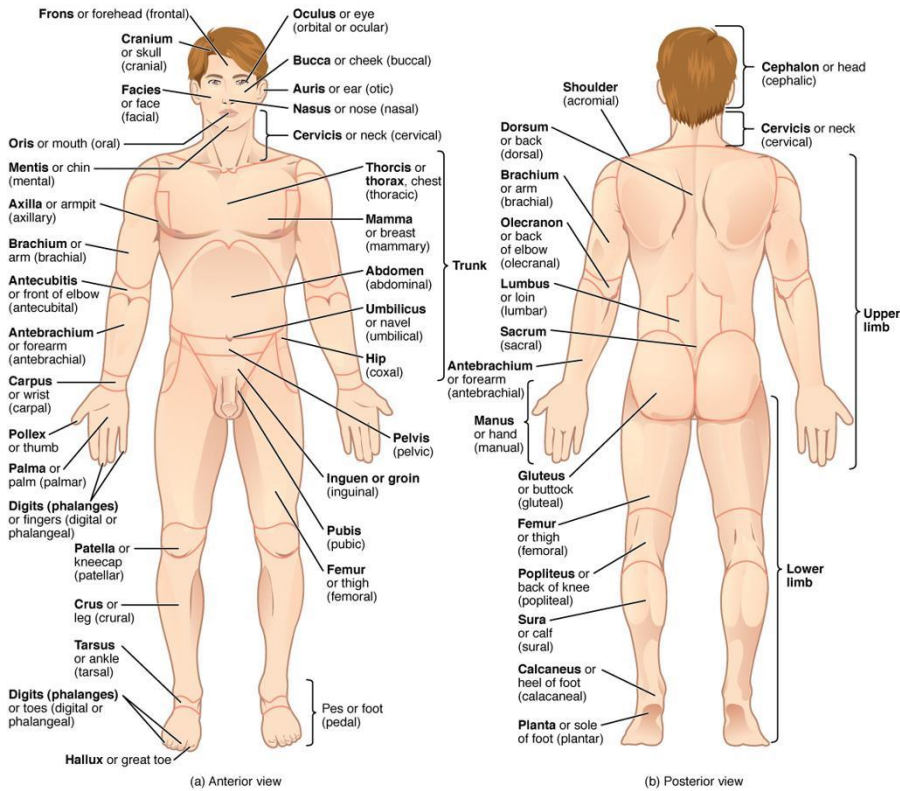
### INTERNAL ORGANS

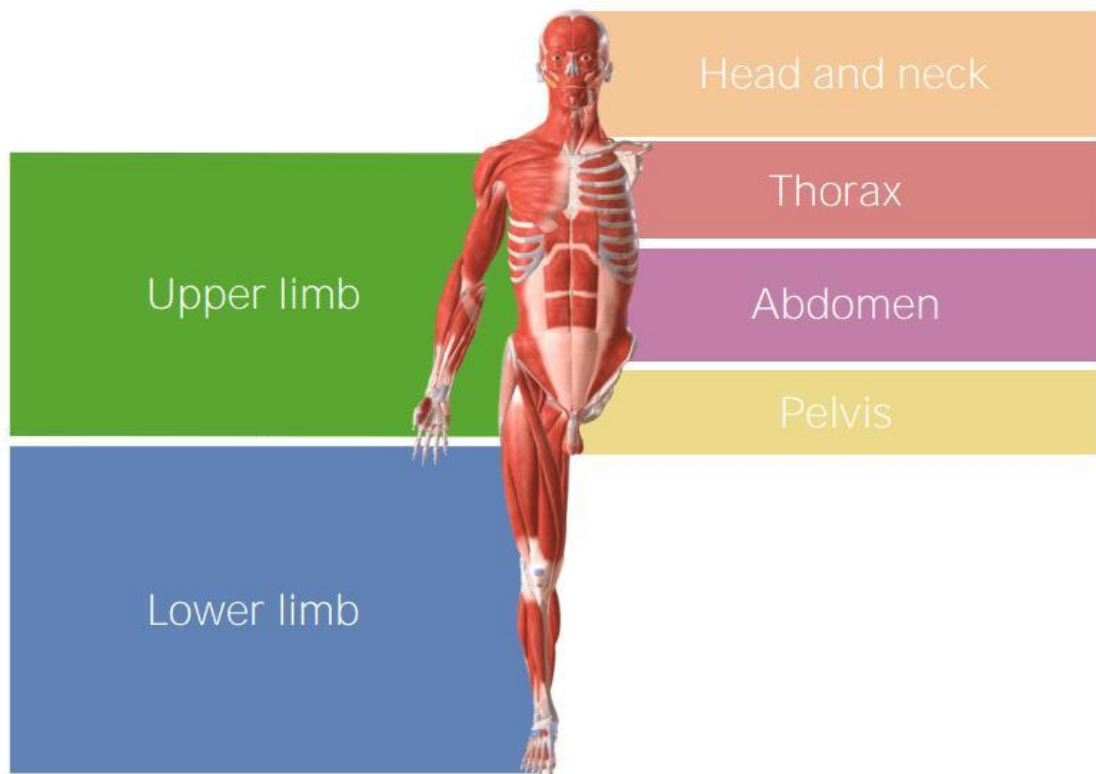
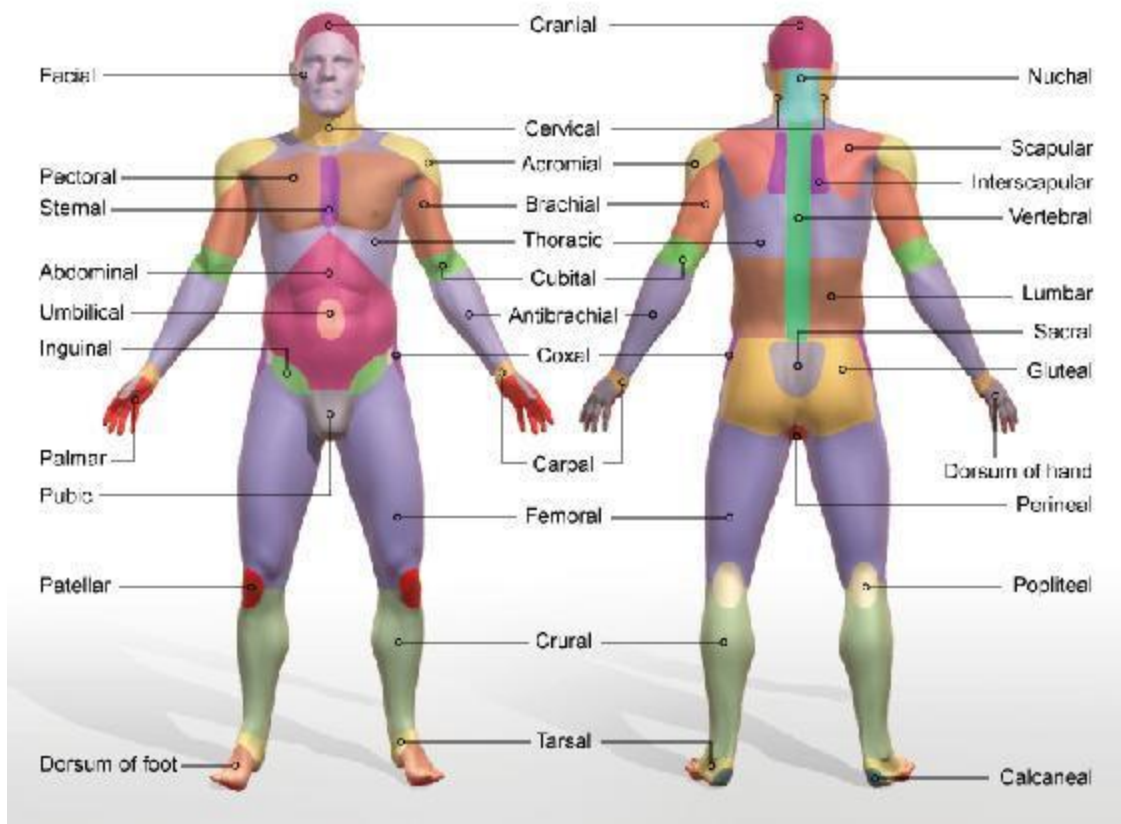


**Definition:**

**Study of body structures that can be seen with the naked eye (without microscope).**

**2. Regional Anatomy**





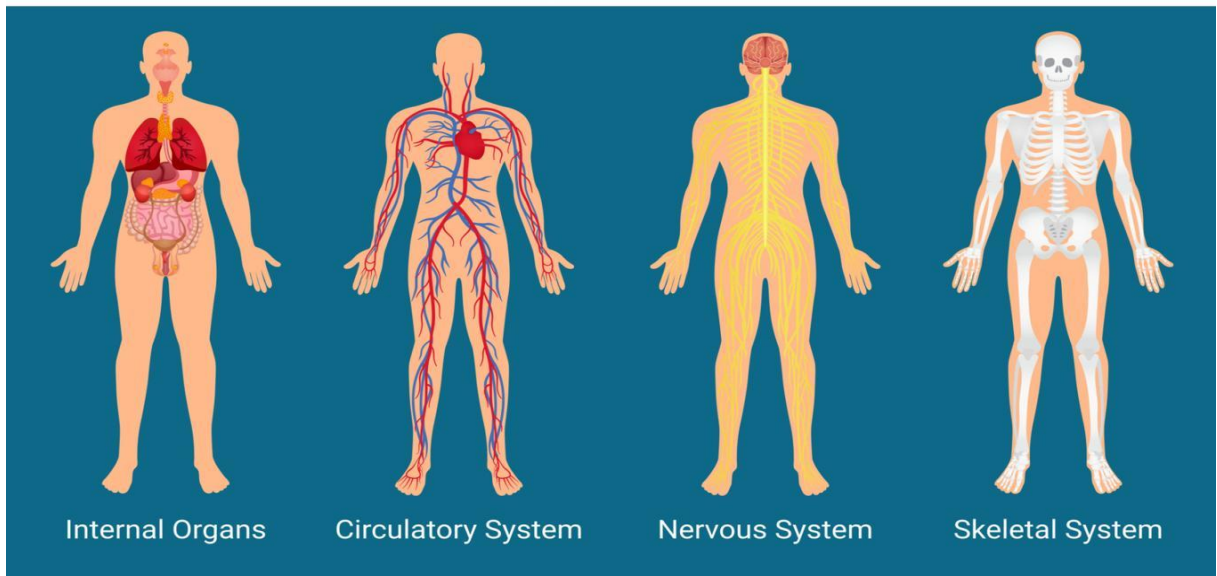
**Definition:**

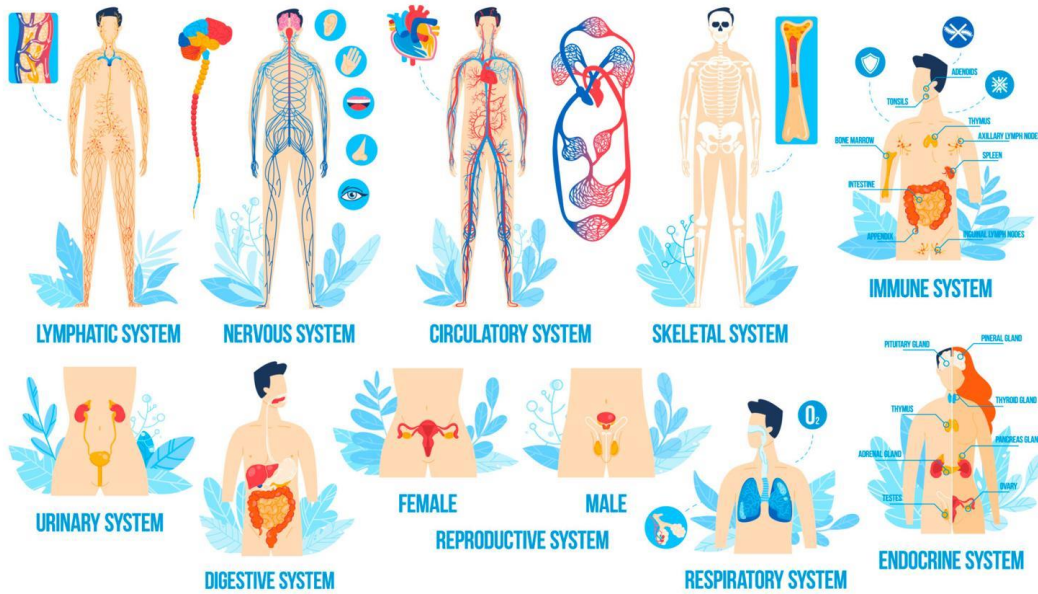
**Study of the body region by region (e.g., head, neck, chest, abdomen).**

- **Example: Studying all structures in the thorax together.**
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**3. Systemic Anatomy**

**• Human Body Organ Systems •**





**Skeletal system**  
provides structure to the body and protects internal organs

**Muscular system**  
supports the body and allows it to move

**Nervous system**  
controls sensation, thought, movement, and virtually all other body activities

**Digestive system**  
breaks down food and absorbs its nutrients

**Respiratory system**  
takes in oxygen and releases waste gases

**Circulatory system**  
transports oxygen, nutrients, and other substances to cells and carries away wastes

**Definition:**  
**Study of the body system by system.**

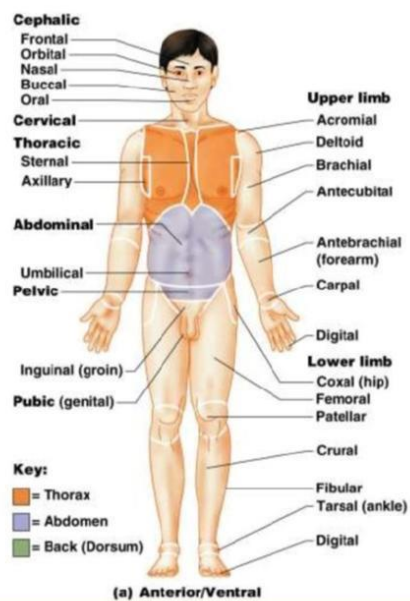
□ **Example systems:**

- **Nervous system**
- **Digestive system**
- **Respiratory system**

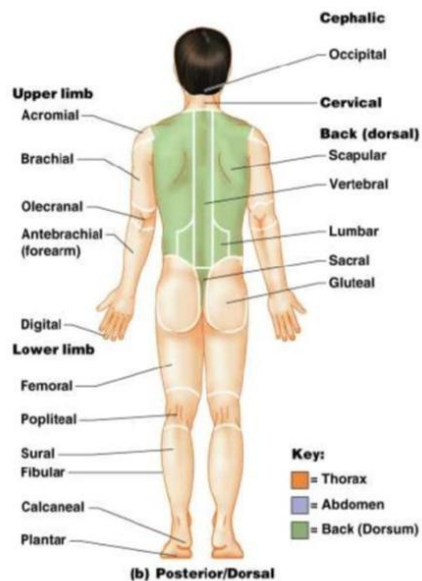
## 4. Surface Anatomy

REGIONAL TERM: ANTERIOR & POSTERIOR

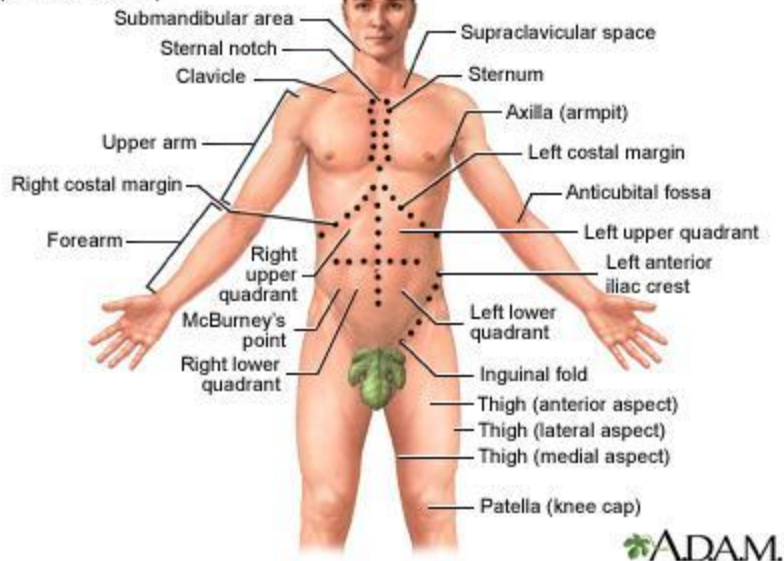
ANTERIOR BODY LANDMARKS



POSTERIOR BODY LANDMARKS



### Anatomical landmarks (front view)



ADAM.

### Anatomical landmarks (side view)



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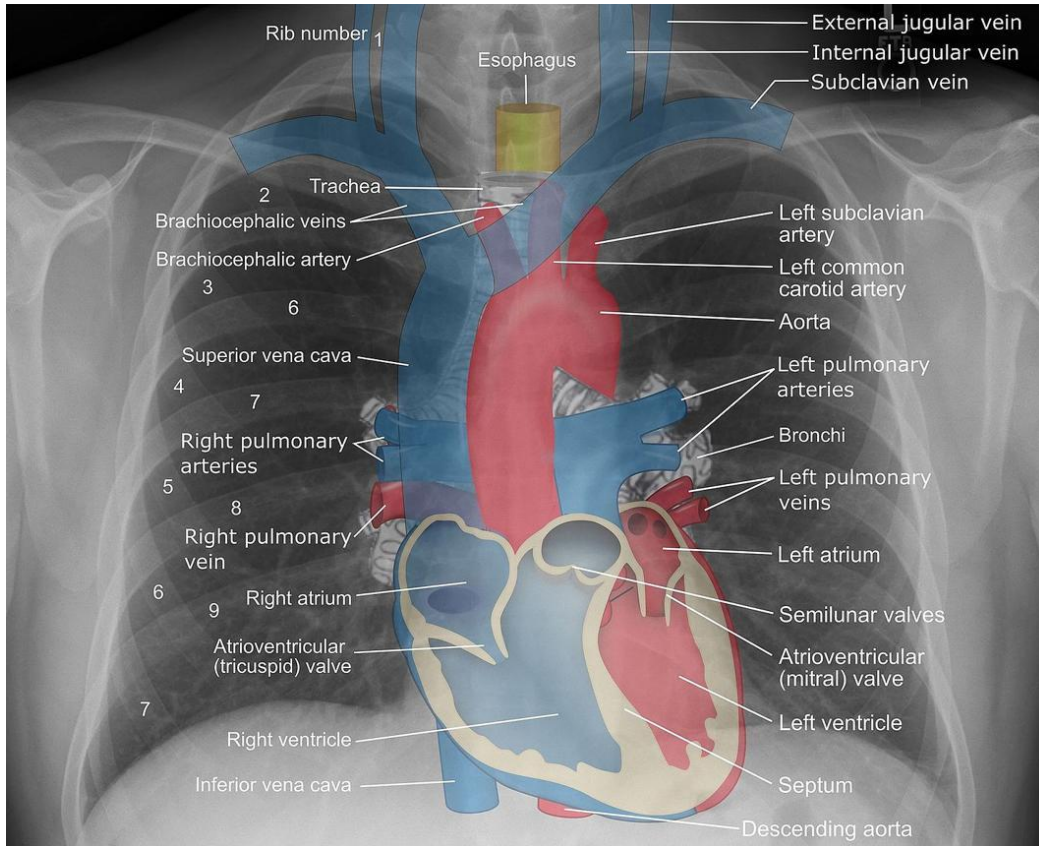
### Definition:

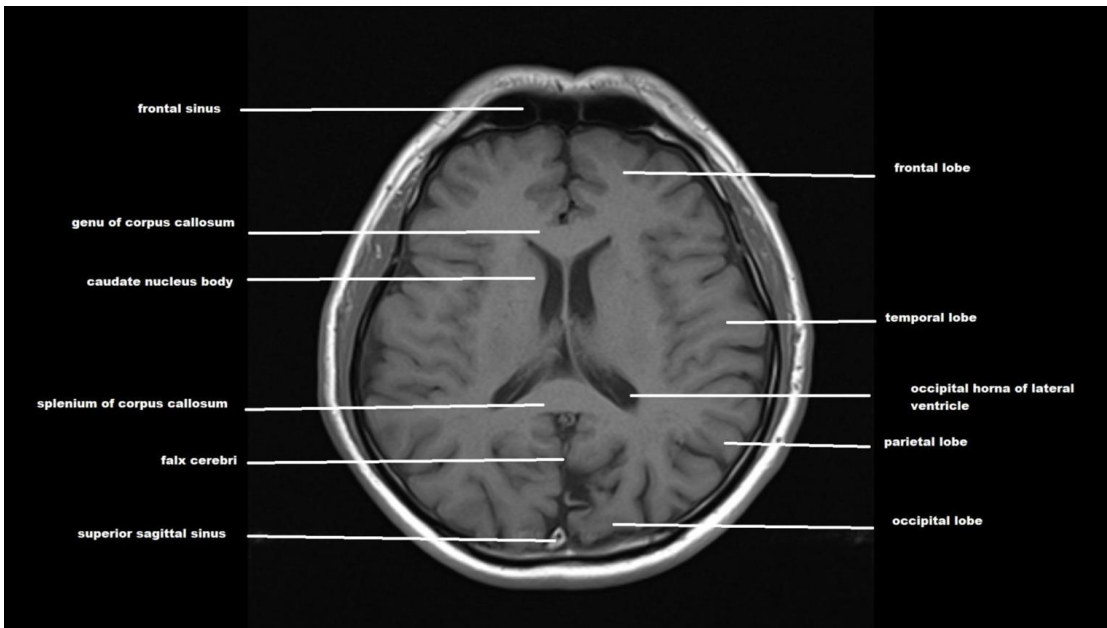
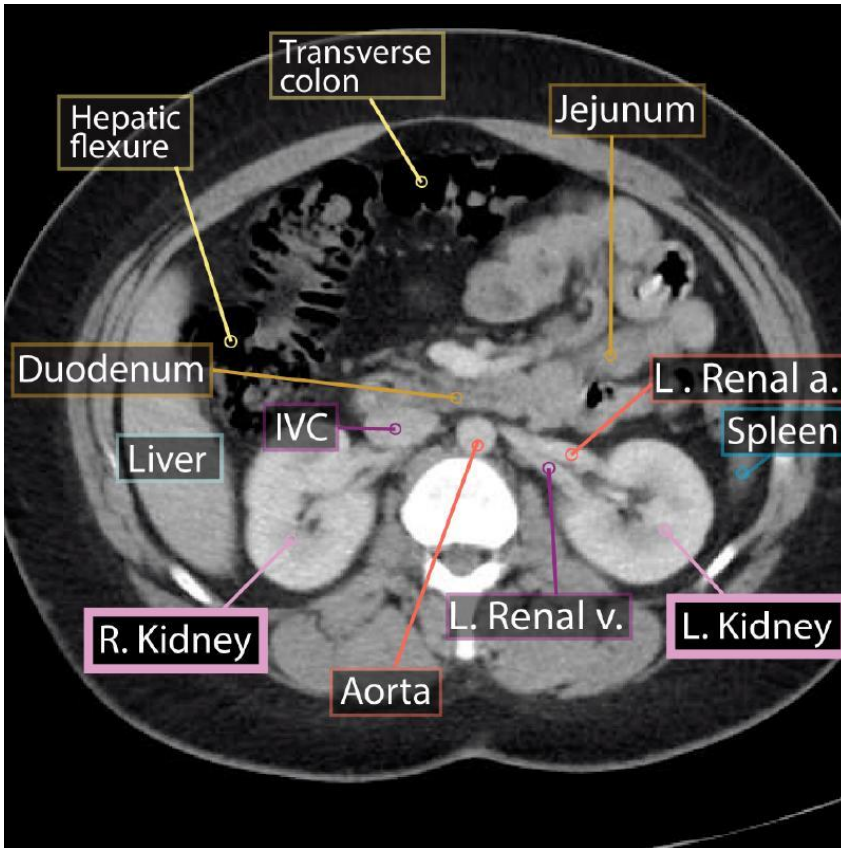
**Study of external features of the body that can be seen or felt on the surface.**

### □ Example:

- **Pulse points**
- **Bones felt under skin**

## 5. Radiographic Anatomy





**Definition:**

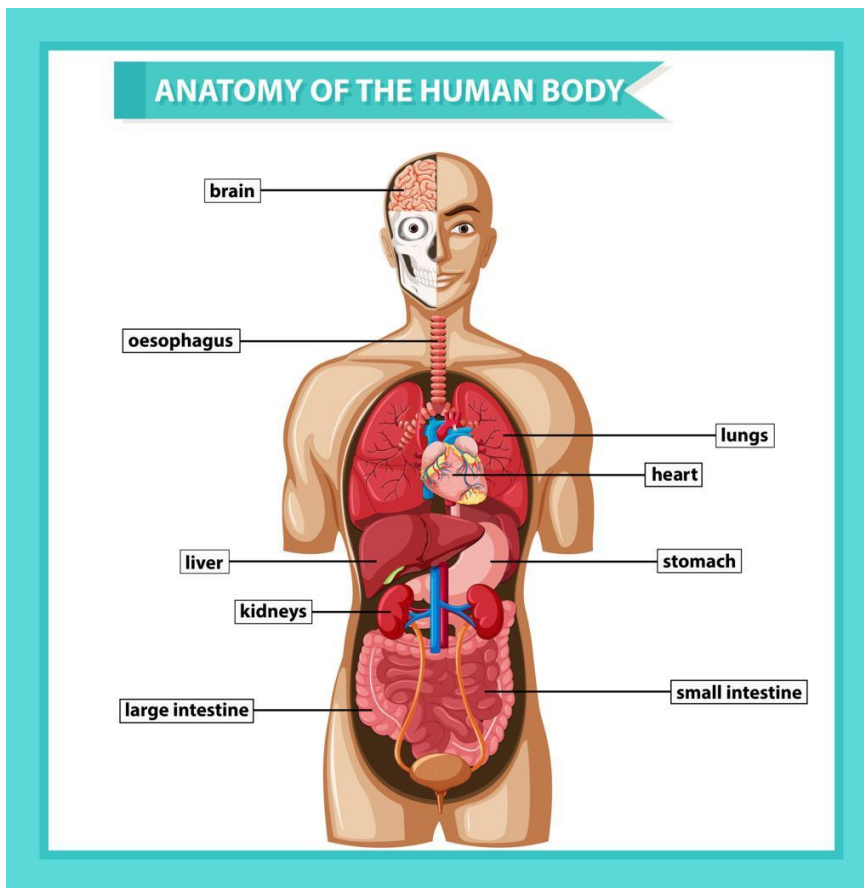
**Study of body structures as seen in medical imaging like:**

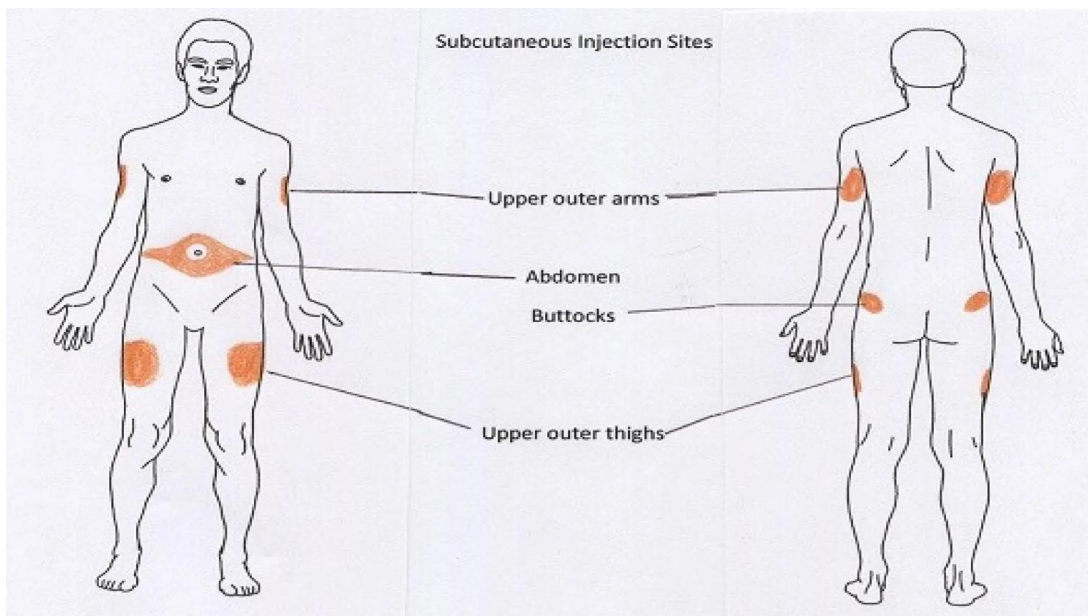
- **X-rays**
- **CT scans**
- **MRI**

□ **Very important for radiography students**

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## 6. Clinical Anatomy





**Definition:**

**Application of anatomical knowledge in medical practice and patient care.**

□ **Example:**

- **Giving injections**
- **Diagnosing diseases**
- **Performing surgery**

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## **SHORT SUMMARY (FOR QUICK REVISION)**

<b>Branch</b>	<b>Definition</b>
<b>Gross Anatomy</b>	<b>Study of structures visible to naked eye</b>
<b>Regional Anatomy</b>	<b>Study of body by regions</b>
<b>Systemic Anatomy</b>	<b>Study of body systems</b>
<b>Surface Anatomy</b>	<b>Study of external body features</b>
<b>Radiographic Anatomy</b>	<b>Study using imaging techniques</b>
<b>Clinical Anatomy</b>	<b>Application in medical practice</b>

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